

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

By the foregoing amendment, claims 1, 2, 5, and 9 have been amended, claim 8 has been canceled, and claim 11 has been added. Accordingly, claims 1-7, 9 and 11 are now pending in this application.

Claim 1 is amended to incorporate the limitations set forth in claim 8 (now canceled), with some necessary modifications. Claims 2, 5, and 9 are amended in conformity to the wording of amended claim 1.

In the outstanding Office Action, the Examiner rejects claims 1-9 as being unpatentable over Aono et al. (U.S. Patent No. 5,521,429) in view of Yamaguchi (U.S. Patent No. 6,081,029) further in view of Takata et al. (U.S. Patent No. 5,977,613), at pages 2 and 3 of the Office Action.

As amended, claim 1, overcomes the above rejection so that the present invention is now in condition for allowance.

Specifically, a semiconductor device set forth in amended claim 1 comprises a semiconductor chip, first and second external connection electrodes connected to the chip, and a resin package which covers the chip and has a mounting surface, wherein each of the first and second electrodes includes a thick portion and a thin portion, the thick portion being exposed to outside only t the mounting surface of the package, the thick portion being not exposed at any other surface of the package.

With the above arrangements, it is possible to mount a plurality of semiconductor chips at a high density (see paragraphs 0045 and 0046, pages 11 and 12 of the present specification). As readily seen, the invention defined in new claim 11 provides the same advantage.

None of the prior art documents cited by the Examiner discloses nor even remotely suggests the technically significant features of the present invention. Specifically, Aono et al ('429) fails to disclose the connection electrodes with the claimed configuration, as the Examiner admits in the last paragraph of page 3 of the outstanding Office Action. Yamaguchi ('029) merely teaches that only one electrode 13 has a thick portion that is exposed at the mounting surface of the package 17, while the other electrodes 12 are not configured in the claimed manner. In fact, Yamaguchi ('029) teaches away from the present invention since the prior art electrode 12 (which corresponds to a second external connection electrode of the present invention) fails to have the stepped configuration of the present invention. Takata et al. ('613) is utterly inappropriate as a prior art document to reject the present invention. The Examiner states, in the last paragraph at page 3 of the Action, that Fig. 2 of Takata et al. shows the required external electrode. This assertion is mistaken since there is no such disclosure in Fig. 2 or even any other part of Takata et al. The thick portions 11a, 12a, 13a of the prior art electrodes 11, 12 and 13 are exposed at a side surface of the package 18, as clearly shown in Figs. 3 and 4.

As discussed above, none of the cited documents disclose nor suggest the advantageous features of the present invention defined in amended claim 1 or new claim 11. Thus, the outstanding obviousness rejections should be withdrawn and all the pending claims should be allowable.

Serial No.: 09/853,784
Art Unit: 2826

Attorney's Docket No.: KIX0146-US
Page 6

In view of the foregoing all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone applicant's undersigned representative at the number listed below.

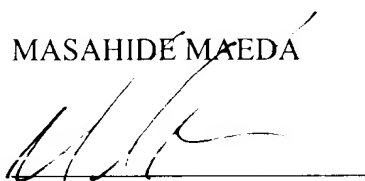
SHAW PITTMAN LLP
1650 Tysons Boulevard
McLean, VA 22102
Tel: 703/770-7900

Date: August 21, 2003

Respectfully submitted,

MASAHIDE MAEDA

By:


Michael D. Bednarek
Registration No. 32,329

MDB/rrs